Attorney Docket No. 9314-59 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: VanEpps, Jr. et al.
Application No.: 10/723,776
Filed: November 26, 2003
Group Art Unit: 2618
Confirmation No.: 9674
Examiner: Christian A. Hannon
For: **METHODS, ELECTRONIC DEVICES, AND COMPUTER PROGRAM PRODUCTS FOR GENERATING AN ALERT SIGNAL BASED ON A SOUND METRIC FOR A NOISE SIGNAL**

Date: August 13, 2007

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Signature: Rosa Lee Brinson
Rosa Lee Brinson

TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION--37 C.F.R. § 41.37)

1. Transmitted herewith is the APPEAL BRIEF for the above-identified application, pursuant to the Notice of Appeal filed on July 13, 2007.

2. This application is filed on behalf of
☐ a small entity.

3. Pursuant to 37 C.F.R. § 41.20(b)(2), the fee for filing the Appeal Brief is:

☐	small entity	$250.00
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☒ Any additional fee or refund may be charged to Deposit Account 50-0220.

Respectfully submitted,

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APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. §41.37

Sir:

This Appeal Brief is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences" filed May 23, 2007 and the "Notice of Panel Decision from Pre-Appeal Brief Review" mailed July 13, 2007.

Real Party In Interest

The real party in interest is assignee Sony Ericsson Mobile Communications AB, Lund, Sweden.

Related Appeals and Interferences

Appellants are aware of no appeals or interferences that would be affected by the present appeal.

Status of Claims

Appellant appeals the final rejection of Claims 1, 4, 7 - 12, 14, 15, 17, 20, 23 - 25, 28, 30 - 32, 35, 37, and 38 as set forth in the Final Office Action of February 23, 2007 (hereinafter "Final Action"). Claims 1, 4, 7 - 12, 14, 15, 17, 20, 23 - 25, 28, 30 - 32, 35, 37, and 38 stand rejected. Claims 5, 6, 13, 16, 21, 22, 29, and 36 stand objected to. Claims 2, 3, 18, 19, 26, 27, 33, and 34 have been canceled. Appellants submit that the claims involved in the appeal are Claims 1, 4 - 17, 20 - 25, 28 - 32, and 35 - 38 as a reversal of the rejection of independent Claims 1, 11, 14, 17, 25, 30 - 32, 37, and 38 is requested and a reversal of the rejection of dependent Claims 4 - 10, 12, 13, 15, 16, 20 - 24, 28, 29, 35, and 36 is also requested based, at least, on the reversal of the rejection of independent Claims 1, 11, 14, 17, 25, 30 - 32, 37, and 38. The claims involved in the appeal as included in Appellants' response to the Office Action of August 11, 2006 are attached hereto as Appendix A.

Status of Amendments

No amendment has been filed in the present case in response to the Final Action.

Summary of Claimed Subject Matter

Independent Claim 1 is directed to a method of operating an electronic device, comprising: receiving a noise signal (Specification, page 8, lines 16 – 17; FIG. 3, block 300), generating a sound metric for the noise signal by performing a Fourier transform on the noise signal to obtain a frequency domain representation of the noise signal (Specification, page 8, lines 17 – 19; page 9, lines 21 – 22; FIG. 3, block 305; FIG. 4, block 400), wherein the sound metric is a loudness profile (Specification, page 9, lines 22 – 31; FIG. 4, blocks 405 and 410; FIG. 5), and generating an alert signal having a spectral composition based on the sound metric (Specification, page 8, lines 19 – 21).

Independent Claim 11 is directed to a method of operating an electronic device, comprising: providing a plurality of alert profiles (Specification, page 8, lines 27 – 30; FIG. 2, block 230), each of the alert profiles being generated to have a spectral composition based on a noise signal sound metric associated with an ambient noise environment (Specification, page 8, lines 27 – 30), receiving a user selection of one of the plurality of alert profiles (Specification,

page 9, lines 5 – 6), and generating an alert signal that is based on the selected one of the plurality of alert profiles (Specification, page 9, lines 5 – 6).

Independent Claim 14 is directed to a method of operating an electronic device, comprising: providing a plurality of alert profiles, at least one of the plurality of alert profiles having a different spectral composition than other ones of the plurality of alert profiles (Specification, page 8, lines 27 – 30; FIG. 2, block 230), then, receiving a noise signal (Specification, page 8, lines 30-31), selecting one of the plurality of alert profiles responsive to receiving the noise signal (Specification, page 8, line 30 – page 9, line 2), and generating an alert signal that is based on the selected one of the plurality of alert profiles (Specification, page 9, lines 5 – 6).

Independent Claim 17 is directed to an electronic device, comprising: a receiver that is configured to receive a noise signal (Specification, page 6, lines 8 – 10; FIG. 2, block 250), a Fourier transform module that is configured to obtain a frequency domain representation of the noise signal (Specification, page 6, lines 10 – 13; FIG. 2, block 210), a sound metric processor that is configured to generate a sound metric for the noise signal based on the frequency domain representation of the noise signal (Specification, page 6, lines 13 – 17; FIG. 2, block 215), wherein the sound metric is a loudness profile (Specification, page 9, lines 22 – 31; FIG. 4, blocks 405 and 410; FIG. 5), and an alert generator that is configured to generate an alert signal having a spectral composition that is based on the sound metric (Specification, page 6, lines 25 – 28; FIG. 2, block 235).

Independent Claim 25 is directed to an electronic device, comprising: means for receiving a noise signal (Specification, page 8, lines 16 – 17; FIG. 3, block 300), means for generating a sound metric for the noise signal by performing a Fourier transform on the noise signal to obtain a frequency domain representation of the noise signal (Specification, page 8, lines 17 – 19; page 9, lines 21 – 22; FIG. 3, block 305; FIG. 4, block 400), wherein the sound metric is a loudness profile (Specification, page 9, lines 22 – 31; FIG. 4, blocks 405 and 410; FIG. 5), and means for generating an alert signal having a spectral composition based on the sound metric (Specification, page 8, lines 19 – 21). The microphone 250 of FIG. 2 provides structure for the means for receiving. The FFT module 210 and loudness processor 215 of FIG.

2 provides structure for the means for generating a sound metric. The alert generator 235 of FIG. 2 provides structure for the means for generating an alert signal.

Independent Claim 30 is directed to an electronic device, comprising: means for providing a plurality of alert profiles (Specification, page 8, lines 27 – 30; FIG. 2, block 230), each of the alert profiles being generated to have a spectral composition based on a noise signal sound metric associated with an ambient noise environment (Specification, page 8, lines 27 – 30), means for receiving a user selection of one of the plurality of alert profiles (Specification, page 9, lines 5 – 6), and means for generating an alert signal that is based on the selected one of the plurality of alert profiles (Specification, page 9, lines 5 – 6). The alert profiles 230 and memory 220 of FIG. 2 provide structure for the means for providing a plurality of alert profiles. The keyboard/keypad 115 and microphone 105 of FIG. 1 provide structure for the means for receiving a user selection. The alert generator 235 of FIG. 2 provides structure for the means for generating an alert signal.

Independent Claim 31 is directed to an electronic device, comprising: means for providing a plurality of previously generated alert profiles, at least one of the plurality of alert profiles having a different spectral composition than other ones of the plurality of alert profiles (Specification, page 8, lines 27 – 30; FIG. 2, block 230), means for receiving a noise signal (Specification, page 8, lines 30-31), means for selecting one of the plurality of alert profiles responsive to receiving the noise signal (Specification, page 8, line 30 – page 9, line 2), and means for generating an alert signal that is based on the selected one of the plurality of alert profiles (Specification, page 9, lines 5 – 6). The alert profiles 230 and memory 220 of FIG. 2 provide structure for the means for providing a plurality of previously generated alert profiles. The microphone 250 of FIG. 2 provides structure for the means for receiving. The loudness processor 215 of FIG. 2 provides structure for the means for selecting. The alert generator 235 of FIG. 2 provides structure for the means for generating an alert signal.

Independent Claim 32 is directed to a computer program product for operating an electronic device, comprising a computer readable storage medium having computer readable program code embodied therein (Specification, page 3, line 30 – page 4, line 19), the computer readable program code comprising: computer readable program code configured to receive a noise signal (Specification, page 8, lines 16 – 17; FIG. 3, block 300), computer readable program

code configured to generate a sound metric for the noise signal by performing a Fourier transform on the noise signal to obtain a frequency domain representation of the noise signal (Specification, page 8, lines 17 – 19; page 9, lines 21 – 22; FIG. 3, block 305; FIG. 4, block 400), wherein the sound metric is a loudness profile (Specification, page 9, lines 22 – 31; FIG. 4, blocks 405 and 410; FIG. 5), and computer readable program code configured to generate an alert signal having a spectral composition based on the sound metric (Specification, page 8, lines 19 – 21).

Independent Claim 37 is directed to a computer program product for operating an electronic device, comprising a computer readable storage medium having computer readable program code embodied therein (Specification, page 3, line 30 – page 4, line 19), the computer readable program code comprising: computer readable program code configured to provide a plurality of alert profiles (Specification, page 8, lines 27 – 30; FIG. 2, block 230), each of the alert profiles being generated to have a spectral composition based on a noise signal sound metric associated with an ambient noise environment (Specification, page 8, lines 27 – 30), computer readable program code configured to receive a user selection of one of the plurality of alert profiles (Specification, page 9, lines 5 – 6), and computer readable program code configured to generate an alert signal that is based on the selected one of the plurality of alert profiles (Specification, page 9, lines 5 – 6).

Independent Claim 38 is directed to a computer program product for operating an electronic device, comprising a computer readable storage medium having computer readable program code embodied therein (Specification, page 3, line 30 – page 4, line 19), the computer readable program code comprising: computer readable program code configured to provide a plurality of previously generated alert profiles, at least one of the plurality of alert profiles having a different spectral composition than other ones of the plurality of alert profiles (Specification, page 8, lines 27 – 30; FIG. 2, block 230), computer readable program code configured to receive a noise signal (Specification, page 8, lines 30-31), computer readable program code configured to select one of the plurality of alert profiles responsive to receiving the noise signal (Specification, page 8, line 30 – page 9, line 2), and computer readable program code configured to generate an alert signal that is based on the selected one of the plurality of alert profiles (Specification, page 9, lines 5 – 6).

Grounds of Rejection to be Reviewed on Appeal

Claims 1, 7, 8, 10, 14, 15, 17, 23 - 25, 31, 32, and 38 stand rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 6,246,761 to Cuddy (hereinafter "Cuddy"). (Final Action, page 2)

Claims 4, 20, 28, and 35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cuddy in view of U. S. Patent Publication No. 2005/0278165 to Boillot et al. (hereinafter "Boillot"). (Final Action, page 4).

Claim 9 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Cuddy. (Final Action, page 5).

Claims 11, 12, 30, and 37 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cuddy in view of U. S. Patent No. 6,134,455 to Corkum (hereinafter "Corkum"). (Final Action, page 6).

Argument

I. Introduction to 35 U.S.C. §102/§103 Analysis

Under 35 U.S.C. § 102, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131 (quoting *Verdegaal Bros. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987)). "Anticipation under 35 U.S.C. § 102 requires the disclosure in a single piece of prior art of each and every limitation of a claimed invention." *Apple Computer Inc. v. Articulate Sys. Inc.*, 57 U.S.P.Q.2d 1057, 1061 (Fed. Cir. 2000). "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" M.P.E.P. § 2112 (citations omitted).

A finding of anticipation further requires that there must be no difference between the claimed invention and the disclosure of the cited reference as viewed by one of ordinary skill in the art. *See Scripps Clinic & Research Foundation v. Genentech Inc.*, 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991). In particular, the Court of Appeals for the Federal Circuit held that a finding of anticipation requires absolute identity for each and every element set forth in the claimed invention. *See Trintec Indus. Inc. v. Top-U.S.A. Corp.*, 63 U.S.P.Q.2d 1597 (Fed. Cir. 2002). Additionally, the cited prior art reference must be enabling, thereby placing the allegedly disclosed matter in the possession of the public. *In re Brown*, 329 F.2d 1006, 1011, 141 U.S.P.Q. 245, 249 (C.C.P.A. 1964). Thus, the prior art reference must adequately describe the claimed invention so that a person of ordinary skill in the art could make and use the invention.

A determination under §103 that an invention would have been obvious to someone of ordinary skill in the art is a conclusion of law based on fact. *Panduit Corp. v. Dennison Mfg. Co.* 810 F.2d 1593, 1 U.S.P.Q.2d 1593 (Fed. Cir. 1987), *cert. denied*, 107 S.Ct. 2187. After the involved facts are determined, the decision maker must then make the legal determination of whether the claimed invention as a whole would have been obvious to a person having ordinary skill in the art at the time the invention was unknown, and just before it was made. *Id.* at 1596. The United States Patent and Trademark Office (USPTO) has the initial burden under §103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

To establish a *prima facie* case of obviousness, the prior art reference or references when combined must teach or suggest all the recitations of the claims, and there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. M.P.E.P. §2143. A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l Co. v. Teleflex Inc.,* 550 U. S. 1, 15 (2007). A corollary principle is that, when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be unobvious. *Id.* at 12. If a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would

improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Id.* at 13. A Court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 13. When it is necessary for a Court to look at interrelated teachings of multiple patents, the Court must determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. *Id.* at 14.

Appellants respectfully submit that the pending independent claims are patentable over the cited reference for at least the reason that the cited reference does not disclose or suggest each of the recitations of the independent claims. The patentability of the pending claims is discussed in detail hereinafter.

A. Claims 1, 7, 8, 10, 14, 15, 17, 23 - 25, 31, 32, and 38 Are Patentable

1. Claims 1, 7, 8, 10, 17, 23 - 25, and 32

Independent Claims 1, 17, 25, and 32 stand rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 6,246,761 to Cuddy (hereinafter "Cuddy"). (Final Action, page 2). Independent Claim 1 recites, in part:

> ...
> receiving a noise signal;
> generating a sound metric for the noise signal by performing a Fourier transform on the noise signal to obtain a frequency domain representation of the noise signal, wherein **the sound metric is a loudness profile**; and
> generating an alert signal having a spectral composition based on the sound metric. (Emphasis added)

Independent Claims 17, 25, and 32 include similar recitations. As highlighted above the sound metric generated for the noise signal is a loudness profile. This is described, for example, on page 9, lines 22 - 30. Note that loudness is not the same as sound intensity or power level. Loudness describes the strength of the ear's perception of a sound. Loudness is measured in terms of sones, where one sone is equivalent to 40 phons. A phon is defined as 1 dB of sound pressure

level at 1 kHz above a nominal threshold of hearing. The Final Action cites the passage from Cuddy at col. 5, lines 40 - 46, which describes analyzing ambient noise to determine its amplitude and frequency characteristics and then calculating the audible characteristics of the ringing tones so that they will be heard over the ambient noise. (Final Action, page 2). In sharp contrast to the recitations of Claims 1, 17, 25, and 32, however, Cuddy does not disclose or suggest generating a loudness profile for the ambient noise signal. Instead, Cuddy merely describes analyzing the amplitude and frequency characteristics of the ambient noise. (Cuddy, col. 5, lines 43 - 46).

For at least the foregoing reasons, Appellants respectfully submit that independent Claims 1, 17, 25, and 32 are patentable over Cuddy and that dependent Claims 4 – 10, 20 – 24, 28, 29, 35, and 36 are patentable at least by virtue of their depending from an allowable claim. Accordingly, Appellants respectfully request that the rejection of independent Claims 1, 17, 25, and 32 be reversed based on the failure of the Examiner to establish a prima facie case of anticipation under 35 U.S.C. §102 for at least these reasons.

2. Claims 14, 15, 31, and 38

Independent Claims 14, 31, and 38 stand rejected under 35 U.S.C. §102(b) as being anticipated by Cuddy. (Final Action, page 2). Independent Claim 14 is directed to a method of operating an electronic device and recites, in part:

> providing a plurality of alert profiles, at least one of the plurality of alert profiles having a different spectral composition than other ones of the plurality of alert profiles; then
>
> receiving a noise signal;
>
> selecting one of the plurality of alert profiles responsive to receiving the noise signal; and
>
> generating an alert signal that is based on the selected one of the plurality of alert profiles.

Independent Claims 31 and 38 include similar recitations. Thus, according to independent Claim 14, at least one of the alert profiles has a different spectral composition than other ones of the alert profiles.

The cited passage of Cuddy explains that various techniques can be used to calculate the audible characteristics used to make the ringing tones heard over the ambient noise. One of the

techniques involves the use of a look-up table in which the changes to the ringing tones' audible characteristics are associated with ranges of amplitude/frequency characteristics of the ambient noise. (Cuddy, col. 5, lines 50 - 59). Cuddy does not explicitly teach whether the table entries regarding changes to the ringing tones include entries that have different spectral composition, i.e., different frequency changes. Cuddy merely states that the table includes records "incorporating information relating to the necessary change (over a default setting) of audible characteristics of the ringing tones to be heard over the ambient noise." (Cuddy, col. 5, lines 55 - 57).

For at least the foregoing reasons, Appellants respectfully submit that independent Claims 14, 31, and 38 are patentable over Cuddy and that dependent Claims 15 and 16 are patentable at least by virtue of their depending from an allowable claim. Accordingly, Appellants respectfully request that the rejection of independent Claims 14 - 16, 31, and 38 be reversed based on the failure of the Examiner to establish a prima facie case of anticipation under 35 U.S.C. §102 for at least these reasons.

B. Claims 4, 20, 28, and 35 Are Patentable

Dependent Claims 4, 20, 28, and 35 stand rejected under 35 U.S.C. § 103 as being unpatentable over Cuddy in view of Boillot. (Final Action, page 4). Dependent Claims 4, 20, 28, and 35 depend from independent Claims 1, 17, 25, and 32, respectively, which Appellants submit are patentable for at least the reasons discussed above in Section IA1. Appellants submit that dependent Claims 4, 20, 28, and 35 are patentable over the cited references at least by virtue of their depending an allowable claim. *Ex parte Ligh*, 159 U.S.P.Q. (BNA) 61, 62 (Bd. App. 1967). Accordingly, Appellants respectfully request that the rejection of Claims 4, 20, 28, and 35 be reversed based on the failure of the Examiner to establish a prima facie case of obviousness under 35 U.S.C. §103 for at least these reasons.

C. Claim 9 Is Patentable

Claim 9 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Cuddy. (Final Action, page 5). Dependent Claim 9 depends from independent Claim 1, which Appellants submit is patentable for at least the reasons discussed above in Section IA1.

Appellants submit that dependent Claim 9 is patentable over the cited reference at least by virtue of its depending an allowable claim. *Ex parte Ligh*, 159 U.S.P.Q. (BNA) 61, 62 (Bd. App. 1967). Accordingly, Appellants respectfully request that the rejection of Claim 9 be reversed based on the failure of the Examiner to establish a prima facie case of obviousness under 35 U.S.C. §103 for at least these reasons.

D. Claims 11, 12, 30, and 37 Are Patentable

Independent Claims 11, 30, and 37 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cuddy in view of Corkum. (Final Action, page 6). Independent Claim 11 recites, in part:

> providing a plurality of alert profiles, each of the alert profiles being generated to have a spectral composition based on a noise signal sound metric associated with an ambient noise environment;
> receiving a user selection of one of the plurality of alert profiles; and
> generating an alert signal that is based on the selected one of the plurality of alert profiles.

Independent Claims 30 and 37 include similar recitations.

In rejecting independent Claims 11, 30, and 37, the Final Action cites col. 5, lines 40 - 49 of Cuddy as disclosing the use of a plurality of alert profiles. Appellants respectfully disagree. The cited passage of Cuddy explains that various techniques can be used to calculate the audible characteristics used to make the ringing tones heard over the ambient noise. One of the techniques involves the use of a look-up table in which the changes to the ringing tones' audible characteristics are associated with ranges of amplitude/frequency characteristics of the ambient noise. (Cuddy, col. 5, lines 50 - 59). Cuddy does not disclose or suggest that such table entries may be available for user selection. Rather, Cuddy states that it is preferable that the telephone "automatically adjust the audible characteristics (amplitude, frequency and/or cadence) of its ringing tones to overcome ambient noise and the effect of the environment immediately surrounding the telephone..." (Cuddy, col. 3, lines 24 - 28).

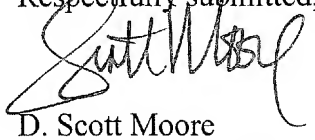
The Final Action cites Corkum as teaching a user selection for a particular alert profile. (Final Action, page 6). This passage cited from Corkum describes the ability of a user to override the automatic ringer volume function by selecting a default or desired annunciation level. (Corkum, col. 6, lines 55 – 60). As discussed above, however, Cuddy does not teach that the changes to the ringing tones' audible characteristics, e.g., amplitude and frequency, are available for selection by a user as the particular changes are selected automatically based on the phone's analysis of the ambient noise. Thus, even if Cuddy is modified to include the teachings of Corkum, the result would be a phone in which the automatic ringing volume function can be overridden by a user, but the user would not be able to select such audible characteristics as the frequency or spectral composition of the ringing tone as recited in independent Claims 11, 30, and 37.

For at least the foregoing reasons, Appellants respectfully submit that independent Claims 11, 30, and 37 are patentable over Cuddy and Corkum and that dependent Claims 12 and 13 are patentable at least by virtue of their depending from an allowable claim. Accordingly, Appellants respectfully request that the rejection of independent Claims 11, 30, and 37 be reversed based on the failure of the Examiner to establish a prima facie case of obviousness under 35 U.S.C. §103 for at least these reasons.

II. Conclusion

In summary, Appellants respectfully submit that, with respect to Claims 1, 4 - 17, 20 - 25, 28 - 32, and 35 - 38, the cited references do not teach all of the recitations of the claims. Accordingly, Appellants respectfully request reversal of the rejection of Claims 1, 4 - 17, 20 - 25, 28 - 32, and 35 - 38 based on the cited references.

Respectfully submitted,



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APPENDIX A – CLAIMS APPENDIX

1. (Previously presented) A method of operating an electronic device, comprising:

receiving a noise signal;

generating a sound metric for the noise signal by performing a Fourier transform on the noise signal to obtain a frequency domain representation of the noise signal, wherein the sound metric is a loudness profile; and

generating an alert signal having a spectral composition based on the sound metric.

4. (Previously presented) The method of Claim 1, wherein generating the sound metric further comprises:

calculating a distribution of sones/bark versus bark for the frequency domain representation of the noise signal using an ISO 532B loudness calculation method; and

determining an overall loudness for the noise signal and a loudness in at least one critical band for the noise signal based on the distribution of sones/bark versus bark, the loudness profile comprising the overall loudness of the noise signal and the loudness in at least one critical band.

5. (Original) The method of Claim 4, wherein generating the alert signal comprises:

determining a power value for the alert signal based on the loudness profile for the noise signal;

determining a transfer function for an alert signal transmit filter based on the loudness profile for the noise signal; and

transmitting the alert signal at the power value using the alert signal transmit filter.

6. (Original) The method of Claim 5, wherein determining the transfer function for the alert signal transmit filter comprises:

selecting coefficients for the alert signal transmit filter.

7. (Original) The method of Claim 1, wherein the sound metric comprises a loudness profile and/or a sharpness profile.

8. (Original) The method of Claim 1, further comprising:

receiving an incoming communication and/or scheduled event at the electronic device; and

wherein receiving the noise signal comprises receiving the noise signal responsive to receiving the incoming communication.

9. (Original) The method of Claim 1, further comprising:

receiving an incoming communication at the electronic device after receiving the noise signal and generating the sound metric for the noise signal; and

wherein generating the alert signal comprises generating the alert signal having the spectral composition that is based on the sound metric responsive to receiving the incoming communication.

10. (Original) The method of Claim 1, wherein the electronic device is a mobile terminal.

11. (Previously presented) A method of operating an electronic device, comprising:

providing a plurality of alert profiles, each of the alert profiles being generated to have a spectral composition based on a noise signal sound metric associated with an ambient noise environment;

receiving a user selection of one of the plurality of alert profiles; and

generating an alert signal that is based on the selected one of the plurality of alert profiles.

12. (Original) The method of Claim 11, wherein generating the alert signal comprises generating the alert signal having a spectral composition that is based on the selected one of the plurality of alert profiles.

13. (Original) The method of Claim 11, wherein generating the alert signal comprises:

determining a power value for the alert signal based on the selected one of the plurality of alert profiles for the noise signal;

determining a transfer function for an alert signal transmit filter the selected one of the plurality of alert profiles for the noise signal; and

transmitting the alert signal at the power value using the alert signal transmit filter.

14. (Previously presented) A method of operating an electronic device, comprising:

providing a plurality of alert profiles, at least one of the plurality of alert profiles having a different spectral composition than other ones of the plurality of alert profiles; then

receiving a noise signal;

selecting one of the plurality of alert profiles responsive to receiving the noise signal; and

generating an alert signal that is based on the selected one of the plurality of alert profiles.

15. (Original) The method of Claim 14, wherein generating the alert signal comprises generating the alert signal having a spectral composition that is based on the selected one of the plurality of alert profiles.

16. (Original) The method of Claim 14, wherein generating the alert signal comprises:

determining a power value for the alert signal based on the selected one of the plurality of alert profiles for the noise signal;

determining a transfer function for an alert signal transmit filter the selected one of the plurality of alert profiles for the noise signal; and

transmitting the alert signal at the power value using the alert signal transmit filter.

17. (Previously presented) An electronic device, comprising:

a receiver that is configured to receive a noise signal;

a Fourier transform module that is configured to obtain a frequency domain representation of the noise signal;

a sound metric processor that is configured to generate a sound metric for the noise signal based on the frequency domain representation of the noise signal, wherein the sound metric is a loudness profile; and

an alert generator that is configured to generate an alert signal having a spectral composition that is based on the sound metric.

20. (Previously presented) The electronic device of Claim 17, wherein the sound metric processor is further configured to calculate a distribution of sones/bark versus bark for the frequency domain representation of the noise signal using an ISO 532B loudness calculation method and to determine an overall loudness for the noise signal and a loudness in at least one critical band for the noise signal based on the distribution of sones/bark versus bark, the loudness profile comprising the overall loudness of the noise signal and the loudness in at least one critical band.

21. (Original) The electronic device of Claim 20 wherein the alert generator further comprises an alert signal transmit filter and wherein the alert generator is further configured to determine a power value for the alert signal based on the loudness profile for the noise signal, determine a transfer function for the alert signal transmit filter based on the loudness profile for the noise signal, and transmit the alert signal at the power value using the alert signal transmit filter.

22. (Original) The electronic device of Claim 21, wherein the alert generator is further configured to select coefficients for the alert signal transmit filter.

23. (Original) The electronic device of Claim 17, wherein the sound metric comprises a loudness profile and a sharpness profile.

24. (Original) The electronic device of Claim 17, wherein the electronic device is a mobile terminal.

25. (Previously presented) An electronic device, comprising:

means for receiving a noise signal;

means for generating a sound metric for the noise signal by performing a Fourier transform on the noise signal to obtain a frequency domain representation of the noise signal, wherein the sound metric is a loudness profile; and

means for generating an alert signal having a spectral composition based on the sound metric.

28. (Previously presented) The electronic device of Claim 25, wherein the means for generating the sound metric further comprises:

means for calculating a distribution of sones/bark versus bark for the frequency domain representation of the noise signal using an ISO 532B loudness calculation method; and

means for determining an overall loudness for the noise signal and a loudness in at least one critical band for the noise signal based on the distribution of sones/bark versus bark, the loudness profile comprising the overall loudness of the noise signal and the loudness in at least one critical band.

29. (Original) The electronic device of Claim 28, wherein the means for generating the alert signal comprises:

means for determining a power value for the alert signal based on the loudness profile for the noise signal;

means for determining a transfer function for an alert signal transmit filter based on the loudness profile for the noise signal; and

means for transmitting the alert signal at the power value using the alert signal transmit filter.

30. (Previously presented) An electronic device, comprising:

means for providing a plurality of alert profiles, each of the alert profiles being generated to have a spectral composition based on a noise signal sound metric associated with an ambient noise environment;

means for receiving a user selection of one of the plurality of alert profiles; and

means for generating an alert signal that is based on the selected one of the plurality of alert profiles.

31. (Previously presented) An electronic device, comprising:

means for providing a plurality of previously generated alert profiles, at least one of the plurality of alert profiles having a different spectral composition than other ones of the plurality of alert profiles;

means for receiving a noise signal;

means for selecting one of the plurality of alert profiles responsive to receiving the noise signal; and

means for generating an alert signal that is based on the selected one of the plurality of alert profiles.

32. (Previously presented) A computer program product for operating an electronic device, comprising:

a computer readable storage medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code configured to receive a noise signal;

computer readable program code configured to generate a sound metric for the noise signal by performing a Fourier transform on the noise signal to obtain a frequency domain representation of the noise signal, wherein the sound metric is a loudness profile; and

computer readable program code configured to generate an alert signal having a spectral composition based on the sound metric.

35. (Previously presented) The computer program product of Claim 32, wherein the computer readable program code configured to generate the sound metric further comprises:

computer readable program code configured to calculate a distribution of sones/bark versus bark for the frequency domain representation of the noise signal using an ISO 532B loudness calculation method; and

computer readable program code configured to determine an overall loudness for the noise signal and a loudness in at least one critical band for the noise signal based on the distribution of sones/bark versus bark, the loudness profile comprising the overall loudness of the noise signal and the loudness in at least one critical band.

36. (Original) The computer program product of Claim 35, wherein the computer readable program code configured to generate the alert signal comprises:

computer readable program code configured to determine a power value for the alert signal based on the loudness profile for the noise signal;

computer readable program code configured to determine a transfer function for an alert signal transmit filter based on the loudness profile for the noise signal; and

computer readable program code configured to transmit the alert signal at the power value using the alert signal transmit filter.

37. (Previously presented) A computer program product for operating an electronic device, comprising:

a computer readable storage medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code configured to provide a plurality of alert profiles, each of the alert profiles being generated to have a spectral composition based on a noise signal sound metric associated with an ambient noise environment;

computer readable program code configured to receive a user selection of one of the plurality of alert profiles; and

computer readable program code configured to generate an alert signal that is based on the selected one of the plurality of alert profiles.

38. (Previously presented) A computer program product for operating an electronic device, comprising:

a computer readable storage medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code configured to provide a plurality of previously generated alert profiles, at least one of the plurality of alert profiles having a different spectral composition than other ones of the plurality of alert profiles;

computer readable program code configured to receive a noise signal;

computer readable program code configured to select one of the plurality of alert profiles responsive to receiving the noise signal; and

computer readable program code configured to generate an alert signal that is based on the selected one of the plurality of alert profiles.

APPENDIX B – EVIDENCE APPENDIX

None

APPENDIX C – RELATED PROCEEDINGS APPENDIX

None.